MARINE PROTECTED AREAS IN UK SEAS

MANAGEMENT OF DAMAGING FISHING – 2025 STOCKTAKE

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THE BASELINE

By 1990, the UK had three marine reserves – measuring 200km² throughout the entirety of the British Isles. These – to some degree – protected species and habitats from damaging activity. Added to this was the nascent European marine protected area network, called Natura 2000 as a result of the Habitats and Birds Directives – EU Directives designed to protect and restore biodiversity as a result of the original Rio Biodiversity Convention (COP) in 1992.

THE EVOLUTION OF CHANGE (2005-2010): A TIME FOR NEW DESIGNATION

The late 2000s was an important period for marine conservation with the book 'Unnatural History of the Sea' by Callum Roberts released in 2007 and 'The End of the Line' film in 2009.

There were government enquiries in the House of Lords and other committees (e.g. cross-party Environment Committee on Food and Rural Affairs (EFRA)) on the efficacy of marine legislation. The Marine and Coastal Access Act (MACA) was enabled in 2009 with a plan to deliver a completed network of MPAs. This work aligned with the OSPAR target of delivering an ecologically coherent network of Marine Protected Areas (MPAs) by 2012. MACA MPA legislation allowed the Secretary of State to designate 'Marine Conservation Zones' (MCZs). These zones protected features and areas in addition to the Natura 2000 network. Projects were established loosely based on the California Marine Life Protection Act process that established 16% of coastal waters for low impact use, and no take MPAs[1]. In the processes of assigning new MCZs to English and offshore Northern Irish seas, four regional stakeholder groups were established comprising over 140 regional stakeholders. These groups were led by expert mappers, economists, social scientists, and fishermen guiding stakeholders to allocate areas of sea for MCZ designation. The recommendations of 127 new Marine Conservation Zones from the four regional stakeholder projects (Finding Sanctuary, Balanced Seas, Net Gain and Irish Seas Marine Conservation Zones) were completed in 2011. A Science Advisory Panel (SAP) reviewed continuous iterations of the plans from stakeholders during the process, whilst government nature conservation advisors were required to pull together statutory advice on conservation objectives for the sites[2]. The Secretary of State was tasked with weighing up the 'best available evidence' to sign off the network, yet only 27 of the original 127 proposed sites were designated in 2013 because the minister didn't feel that the data was reliable enough to support designation of many sites. Further 'tranches' of designation occurred in 2015 and 2019, resulting in 97 MCZs designated throughout England, Wales and Northern Ireland (91 in England, 1 in Wales and 5 in Northern Ireland). All recommended Highly Protected MCZs were not designated, even though stakeholders came up with a comprehensive list.

Scotland as a devolved country created its own legislation to finalise its network of sites. It created 'nature conservation Marine Protected Areas (ncMPAs)' as a result of the Marine (Scotland) Act 2010. It resulted in 30 MPAs in nearshore and offshore waters that were designated in one tranche by the first minister in 2014. Northern Ireland also created four new Marine Conservation Zones in 2016, that led to protection from bottom towed gears in recent years (January 2023).

The Marine and Coastal Access Act (MACA) was enabled in 2009 with a plan to deliver a completed network of MPAs

[1] Marine Life Protection Act - Wikipedia

[2] Site Search

AT THE SAME TIME AS DEVELOPING A NETWORK OF MPAS, BATTLES AGAINST INCREASING NEARSHORE DREDGING AND OTHER DAMAGING FISHING WERE TAKING PLACE

Whilst the evolution of the network was being legislated for, designed and built, there were still a good number of threats to pre-existing Marine Protected Areas in the UK.

Such areas under threat were largely designated under the Habitats and Birds Regulations (the so-called 'Natura network' of MPAs). These sites were largely left exempt from any protection from damaging fishing in their early years. Statutory Nature Conservation bodies gave erroneous advice such as 'pre-existing activities, including fishing are exempt from assessments'. The law – in terms of fisheries management, was being ignored/overlooked as to the levels of protection necessary to meet minimum legal requirements, and particularly over appropriate assessments of plans or projects currently being undertaken (pre-existing) or those new applications seeking a license. However, a significant ruling emerged in the Waddenzee, Netherlands in 2004 that established – via a complaint to the European Commission – that all existing and ongoing renewed fishing licenses were subject to appropriate assessments in any Natura site to ensure no damage to site features was occurring, either alone, or in combination with any other human activity[3].

A contemporary and seminal case against scallop dredging tested the Habitats Regulations in UK coastal waters at Strangford Lough, Northern Ireland that was damaging a vulnerable horse mussel reef. It resulted in the threat of fines from the EU against the Northern Ireland administration that led to an immediate ban on all scallop dredging in the site (2003)[4].

The coral reefs of the Darwin Mounds (180km northwest of mainland Scotland) were being damaged by heavy bottom towed trawls in the late 1990s. The site was given emergency protection measures in 2003 after a campaign by Greenpeace against the UK that hadn't set up any offshore marine protected areas[5].

Mitigation and compensation for damage to wetland habitats within the Humber SAC and SPA was triggered in order to protect and ensure a favourable amount and quality of coastal wetlands for birds, whilst a port-expansion proposal was not accepted by the Secretary of State in Dibden Bay (near the Solent) because of the threat to local bird populations & habitats[6].

[3] Liberalising the Threshold of Precaution — Cockle Fishing, the Habitats Directive, and Evidence of a New Understanding of 'Scientific Uncertainty' - Elen R. Stokes, 2005

[4] Sustainable Development Strategy for Northern Ireland's Inshore Fisheries

[5] 18. Darwin Mounds SAC - Fisheries Management Measures within Scottish Offshore Marine Protected Areas (MPAs) - Site Proposal Document - gov.scot

[6] Ecological Mitigation Project - South Humber | South Humber

The law – in terms of fisheries management, was being ignored/ overlooked as to the levels of protection necessary to meet minimum legal requirements

Successful cases banning damaging fishing that were decimating delicate worm reefs were brought to the attention of the EU by local Scottish divers and nature tourism operators in the early 2000s. Measures were introduced to protect these habitats that have sadly further declined since 2005[7].

The Wildlife Trusts lobbied and campaigned for protection of Lyme Bay reefs before it was designated as an MPA between 2003 and 2008, resulting in a general ban to bottom towed fishing in 2008, signed by the Secretary of State. A similar case led by the Marine Conservation Society and local campaigners between 2006 and 2008 tested the Habitats Regulations in Falmouth over scallop dredging in that MPA. This was damaging rich calcareous maerl beds that take 1000s of years to develop. The then secretary of state Jonathan Shaw closed both Lyme Bay and the Fal and Helford Special Area of Conservation to mobile bottom towed fishing in 2008[8].

Widespread damaging fishing occurred in Welsh waters in 2008 and 2009 with Cardigan Bay SAC, and Pen Llŷn a'r Sarnau SACs both targeted by large aggregations of scallop vessels. This resulted in the Wales Scallop (2010) Order that closed Welsh SACs to scallop dredging almost entirely[9] but continued to allow small-scale trawling and netting within these sites.

The threat of complaints to the European Commission that scallop dredging & prawn trawling were being overlooked by different UK fishing administrations was clearly having an impact at this time. Both Lyme Bay and Falmouth were seminal English cases in the face of rising impact of nearshore trawling caused by a lack of whitefish quota moving some inshore boats to fish for non-quota scallops. Scallop dredging directly led to damage in and around reef and rich sediment habitats in new inshore scallop fishing grounds. As such, MPAs without any direct protection (local regulation under byelaw, or national regulation under Statutory Instrument) were suffering widespread collateral damage.

[7] Case study: Persistent damage to the Loch Creran serpulid reefs | Scotland's Marine Assessment 2020

[8] Up-Frenchmans-creek-A.pdf

[9] Written Statement - Welsh Scallop Fishery 2011-12 (14 November 2011) | GOV.WALES

MAKING THE CASE MORE BROADLY

Between 2009 and 2011, the Marine Conservation Society (ecological science & policy) and ClientEarth (legal advice), supported by Tom Appleby from Blue Marine Foundation combined forces to threaten a Judicial Review on systematic and continued cases of scallop dredging and bottom trawling in English coastal sites.

Cases were compiled by MCS through Freedom of Information requests and from local contacts. These provided evidence of incursion into sites by damaging fishing that was at times corroborated by Seasearch dive surveys. ClientEarth provided legal briefings and text, and secured the services of a barrister to represent both ClientEarth and MCS. In summer 2011, before court proceedings were triggered by the NGOs, the government announced a 'revised approach to fisheries management' to the potential JR by delivering time-bound protection measures to MPAs. The measures were to be introduced by specific regulatory bodies, with a tiered system of protection from the most damaging activities to the most vulnerable habitats (from 2012-2014), followed by management measures to protect habitats and other features where the evidence was lacking or less clear (so-called 'amber risk' sites and features) from between 2015-2017. Unfortunately not all necessary measures were in place within the timeframes. An initial review of the efficacy and legal application of the first set of regulations by ClientEarth (2014)[10] was moderately critical of the byelaws introduced by local fisheries regulators. A further review illustrated the impact of this work[11].

The measures were to be introduced by specific regulatory bodies, with a tiered system of protection

The revised approach timetable and the pressure from NGOs prompted Government to establish a '*Revised approach to fisheries management in European marine sites*' implementation group.[12] This comprised the statutory agencies, JNCC, NE, Defra, MMO, IFCA, selected scientists, ClientEarth, MCS and Wildife Trusts. The meetings were approximately biannual, and showed the evidence behind individual regulations (byelaws) that were being implemented as part of the pre-agreed timetable. Meetings were effective until around 2015 by which time there had been some measurable progress[13].

Offshore (>12nm from the coast)

Significant fisheries management measures to protect offshore MPAs followed Brexit (after January 2021). Here the UK was able to act unilaterally to effectively transpose remaining EU and domestic legislation to protect offshore MPAs from the worst impacts of ongoing fishing – as long as management measures applied to both UK and EU vessels. Prior to leaving the EU, the UK had to negotiate fishing restrictions with all interested member states to come up with a 'Joint Recommendation' (JR) that were to be signed off by the European Commission. Examples of sites protected within the EU by JR show a considerable weakening of conservation measures due to this political process. However, since Brexit, the UK can now act alone to meet conservation objectives of MPAs. In March 2022 the UK announced the closure of the 12,330 km2 Dogger Bank SAC in UK waters to damaging bottom seine, trawl & dredge fishing. Three other offshore MPAs were also fully or partially closed to bottom towed fishing. A further 13 offshore MPAs were protected in March 2024, and there are 41 MPAs in offshore waters of England currently being considered by ministers for protection measures from damaging fishing. Scotland has yet to protect offshore MPAs to damaging fishing other than those sites too deep to fish, or when pressured to by the European Commission (the Darwin Mounds in 2003).

[10] Revised approach to fishing in European Marine Sites: A status report | ClientEarth

[11] Dialectics of nature_ The emergence of policy on the management of commercial fisheries in english European Marine Sites

[12] Fisheries in European Marine Sites Implementation Group: Terms of reference

[13] Fisheries in European Marine Sites Implementation Group: Terms of reference

Why are the sites better off now?

Since EU exit, the MMO has been able to apply more comprehensive fisheries management measures for UK offshore MPAs in English waters than had the UK been part of the EU – measures that the managers (in the MMO) understood to be required based on the technical scientific evidence provided by advisors (e.g. JNCC & NE) and scientists (e.g. CEFAS). Discussions between UK and other member states prior to EU Exit with Defra and MMO officials over fisheries management measures were politically compromised by the 'Joint Recommendation' process of Article 11 of the CFP. Article 11 requires consensus between member states of proposed management measures by the host-country of offshore MPAs. Prior to EU exit, the initial JR plans for UK offshore MPAs only had a very small amount of area inside MPA boundaries mooted for protection. These fractions of sites didn't meet minimal legal or ecological requirements according to the Habitats Regulations (or indeed Habitats Directive); particularly related to Article 6 requirements of the MPA law.

Since the UK left the EU and Article 11 negotiations no longer apply, UK regulators have used the science and law to regularly propose and result in 'whole site' protection in many offshore MPAs including Dogger Bank, South Wight Maritime, South Dorset, East of Haig Fras MCZ (Fig. 1) and, Haig Fras SAC. This has led to threat and opprobrium from EU fleets including predominantly the Dutch and French fishing representatives, regardless of the evidence.

Foreign fleet representative groups were invited to discuss designation of UK MPAs (MCZs) during MPA discussions between 2010-2012, and in 2015 for offshore sites alone. These fishing interest groups were made aware of the measures by notice from the MMO during the consultation phases since EU Exit. Subsequent fisheries management measures are non-discriminatory as required under the EU/UK Trade and Cooperation Agreement, as they apply equally to UK and EU vessels.

Further offshore MPA management measures are likely to be in place in 2025 in England and Scotland, curtailing EU and UK vessels from access to sites with vulnerable seabed habitats.

Since the UK left the EU and Article 11 negotiations no longer apply, UK regulators have used science and law to appply 'whole-site' protection for many sites.

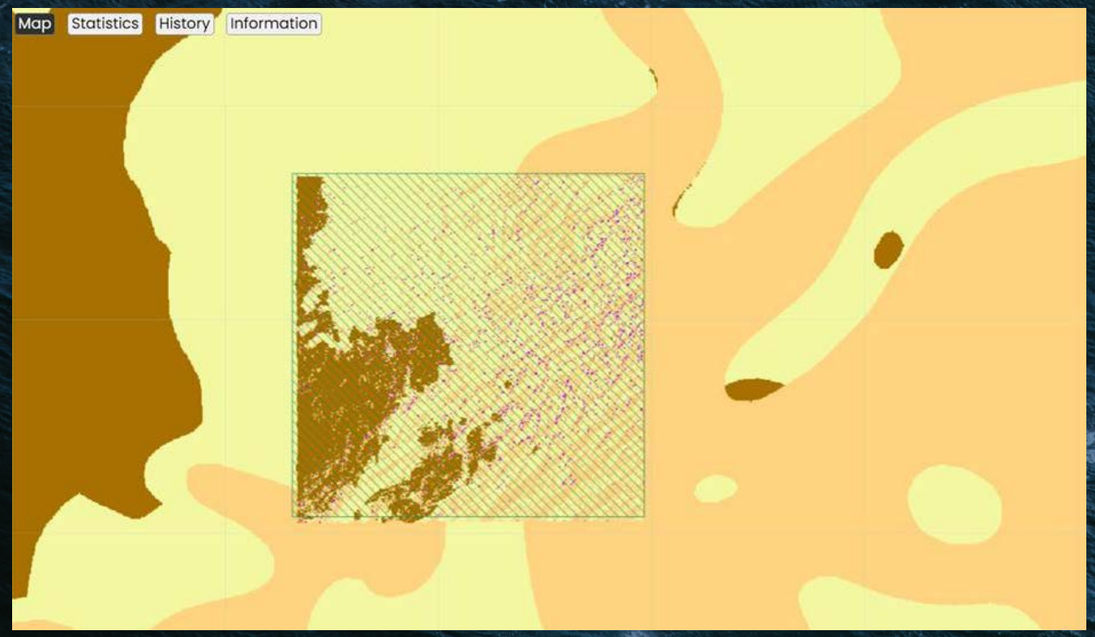


Figure 1. East of Haig Fras Marine Conservation Zone (MCZ) that has a combination of reef, mixed sediment and muddy habitat. The MMO has protected the whole of this site, despite its mixed mosaic of habitats. This is because it has a wide variety of habitats with reef associated species throughout the site. Map from MPA Reality Check (www.mpa-reality-check.org)

SUMMARY

There has been a variety of responses of different management authorities to MPA protection: Inshore Fisheries and Conservation Authorities for English coastal waters, Marine Management Organisation for offshore English waters, Northern Ireland, Welsh and Scottish Governments for their waters. There are some examples where a whole site approach to management is being applied that covers protection of all parts of ecosystems within MPAs. The appendix illustrates why measures are applied differently in a selected number of sites where the author was present in consultations over management measures, and those that appear to offer minimal protection.

We've seen from the revised approach an increase in the proportion of the seabed protected from bottom towed fishing gears. The current author developed the **MPA Reality Check** (MPA Reality Check) with a consultant designer (Tom Mullier of marinemapping) that has been useful at illustrating where whole-site approach management measures have been applied, and where partial protection is in place that could be argued don't meet legal requirements, and don't meet the aspirations of MPA development by the public.

APPENDIX 1

Sites with a lack of whole-site protection.

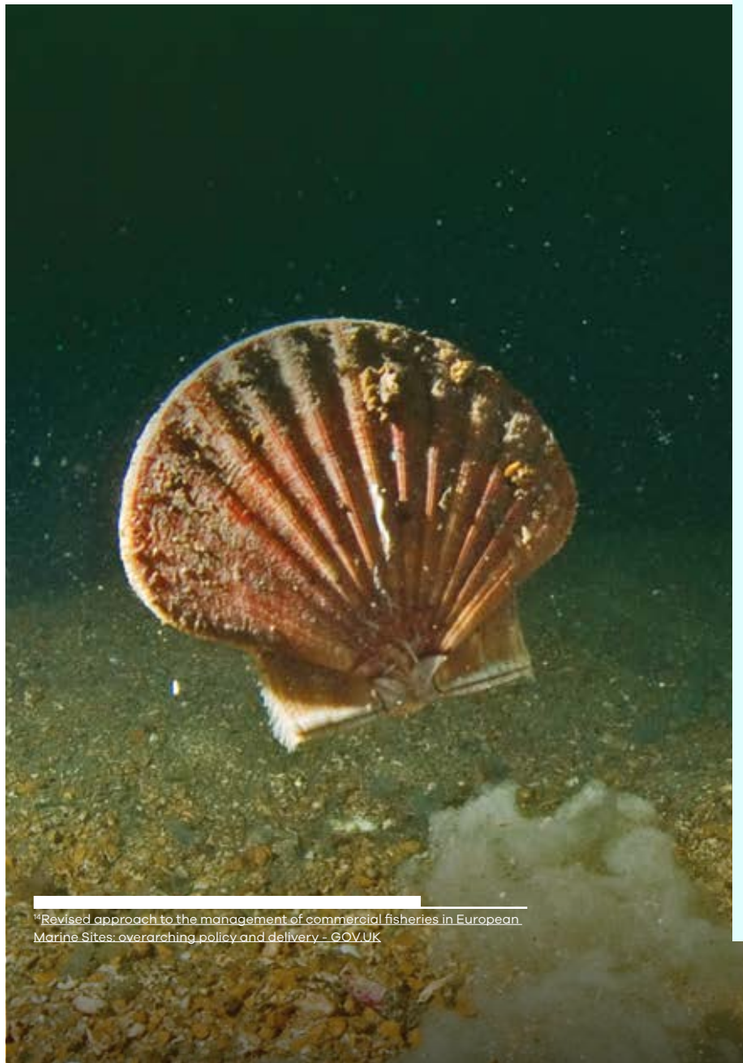
For the sites below, there is a lack of protection of the whole of sites based on two reasons: 1. The features designated for protection within the site don't extend throughout the entirety of the site (e.g. Fig. 7 in Berwickshire), and 2. Fishers using bottom towed gears operate their gear in sections of the site where regulators have deemed they should be able to continue to operate (e.g. Fig 2 off North Norfolk).

Management below was largely undertaken in 2 phases: Red 'high risk' features were protected initially (mostly by 2014), with amber 'moderate risk' or 'lacking distributional information' targeted with byelaws timetabled to be in place by 2016[14]. Many Inshore Fisheries and Conservation Authorities (IFCAs) missed their timetabled targets, particularly for the amber risk sites.

The increased management workload of the 10 IFCAs around England was difficult, because they were tasked with managing an increased number of MPAs whilst their resources were cut – in real terms.

It was initially inshore MPAs that were targeted with fisheries management because being part of the EU at that time watered down offshore MPA management.

An English national 'Implementation Group' chaired by Defra from 2013-2015 gathered key stakeholders to review and forecast workplans and results of fisheries management from the process. It was initially inshore MPAs that were targeted with fisheries management because being part of the EU at that time watered down offshore MPA management.



[14] Revised approach to the management of commercial fisheries in European Marine Sites: overarching policy and delivery - GOV.UK

Case 1: The Wash Special Area of Conservation (SAC)

1. Partial protection of important fishing ground areas (for brown shrimp).
2. Partial protection of *Sabellaria* reef based on questionable definition of the persistence of biogenic reef areas through time (of a naturally ephemeral habitat).
3. Protection of areas of habitat (*Sabellaria* reef) that are so small that a trawler could go over them without knowing, and where sediments disturbed by fishing adjacent to these small areas could damage adjacent reefs within the small closed areas (some as small as 100m by 100m – see below).
4. There was only partial protection of mapped sandbank and mudflat habitat in the second stage of developing byelaws for the site.
5. There is a delineation of areas fished being left unprotected whilst areas that appear not to be fished (from in water observation of vessels) are protected in the byelaw.
6. At the time, bycatch of typical fish species associated with the site by small-mesh brown shrimp otter trawl nets wasn't considered to be affecting the conservation objectives of the site.

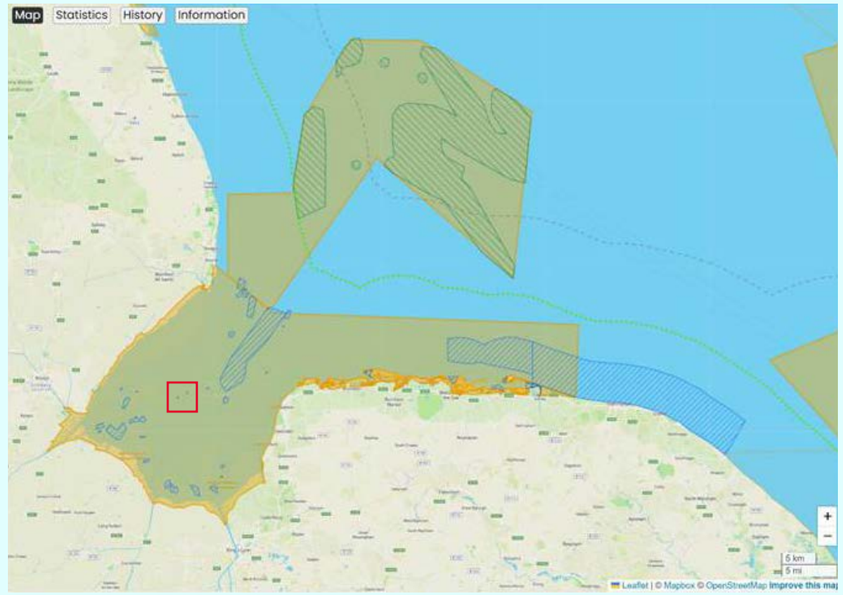


Figure2. 'Closed' areas are hatched polygons (shapes) inside The Wash MPA boundaries (yellow). The red box illustrates two small 100mx100m closed areas to protect *Sabellaria* worm reef within the Wash Special Area of Conservation. Less than 50% of the site is closed to bottom trawling although a combination of mudflats, sandbanks and Sabellaria reef features cover the entirety of the seabed of the site. Closures occur predominantly in areas where the brown shrimp fishers do not trawl. (Map from MPA reality check).

Case 2: Thanet SAC

Thanet SAC

The Thanet SAC was closed to trawlers in 90% of the site, but the area that trawlers traditionally operated was largely left open to the northwest of the site. Trawlermen claimed that a large area of their historical grounds was compromised by the large offshore wind installation in the adjacent Margate to Longsands SAC (see below). The remaining open ground below had mapped areas of chalk reef; the designated feature to be protected in the MPA.

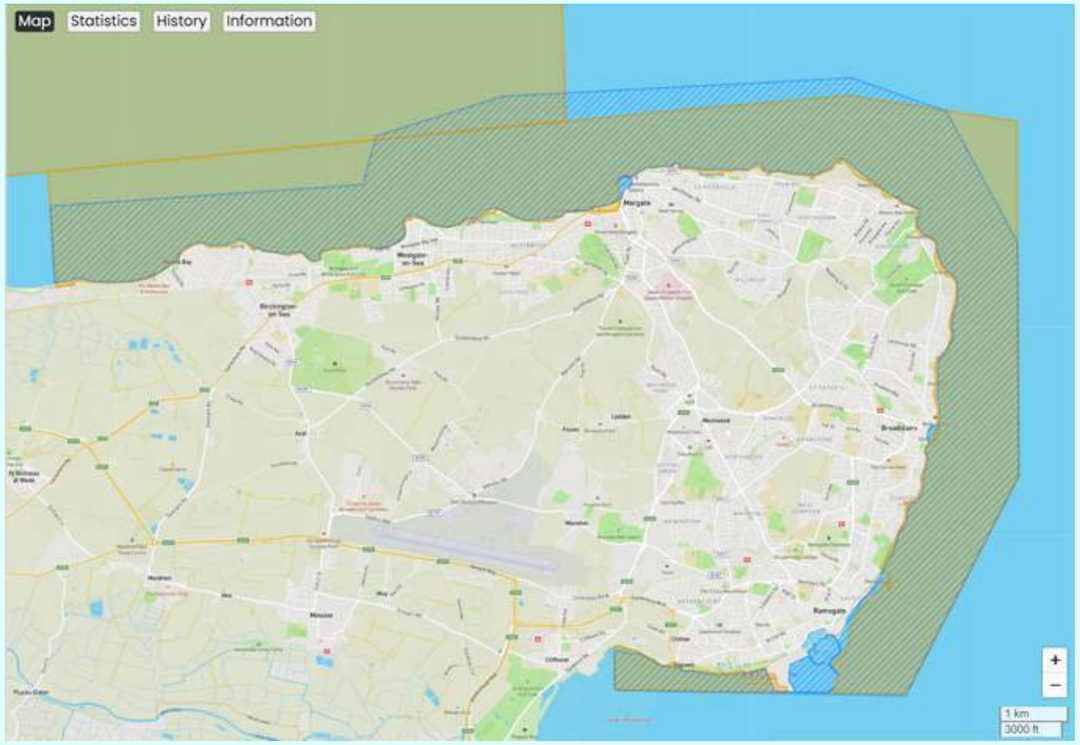


Figure 3. The IFCA did include a buffer zone that extended outwith the northern section of the SAC boundary to ensure that all the reef feature was protected in this section. So whilst there was concern with a lack of protection at the western side of the site in a small area of chalk reef, the northern extension of the byelaw extended protection of this rare habitat. (map from MPA reality check).

Case 3: Margate and Longsands SAC

Margate and Longsands is a largely unprotected SAC. Only a small proportion of the site is protected to maintain fishers traditional fishing grounds, and because fishers feel limited in their access by the presence of windfarms to the east and west of the site. 3 areas were closed in the inshore (0-6nm) zone by IFCA, whereas 2 small locations were closed within the site in the midshore zone (6-12nm) by the Marine Management Organisation. These areas combined only closed <30% of the site to bottom towed fishing. At the time NGOs believed this wasn't a legal interpretation of the regulations as there was no proof that the damage incurred in open grounds wasn't negatively impacting the integrity of the entire site, and in the closed areas themselves.

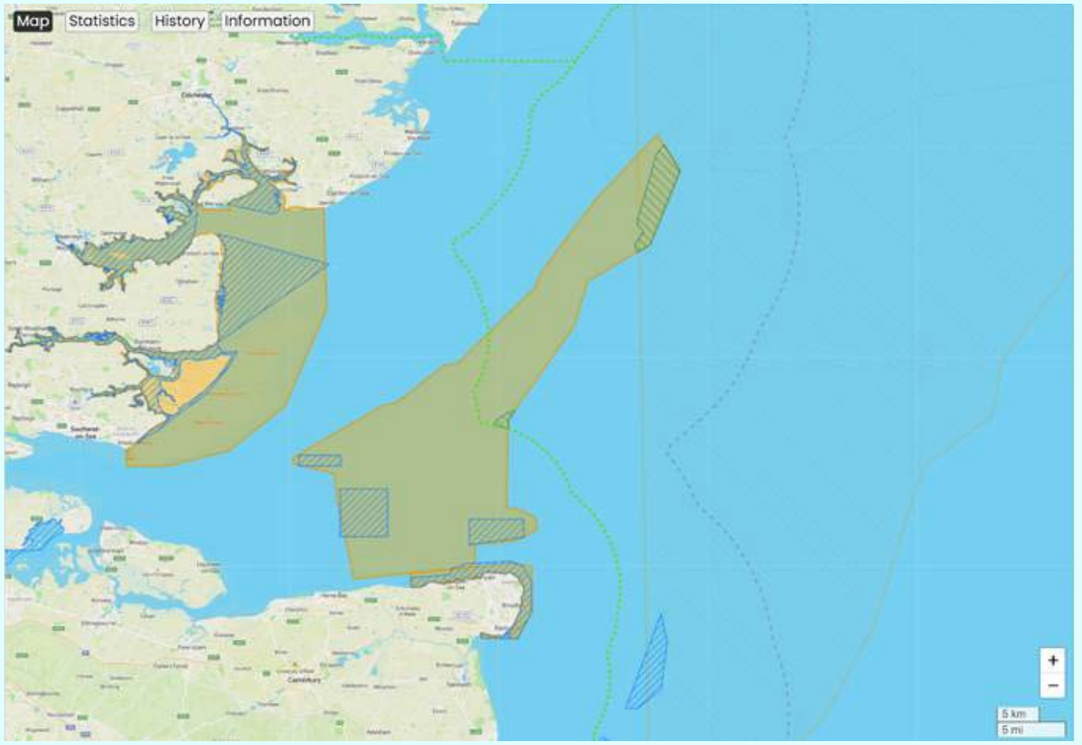


Figure 4. Closures to bottom towed gears of two coastal MPAs, Essex estuaries (to the west) and Margate and Longsands SAC (off the north Kent coast). Note the small area of the closures relative to the scale of the entire sites that are protected for sedimentary habitats (Map from MPA Reality Check).

Case 4: Kent and Essex Estuaries

The Essex estuaries was partially closed to bottom towed gears in the areas that the towed fishing gear boats didn't operate according to vessel observation data provided at the time. Partial protection of sandbank and mudflat habitats were – much like for Margate and Longsands SAC above - deemed by NGOs not to meet the minimum requirements of the Habitats Regulations. A lack of concrete knowledge of the connectivity of habitat and threat from fishing was not used to close a much more comprehensive proportion of the site. During the development of the byelaw, there were some habitat areas that weren't mapped, particularly in areas left open to bottom towed fishing to the north. There remains the potential for continued deterioration of the site by leaving significant areas open to trawling with direct damage to seabed habitats whilst hindering the recovery of typical species[15]. Aspects of essential habitat use by mobile species such as flatfish, demersal roundfish, estuarine tidal migrations (sharks, bass, mullet) all hold an important role for regional populations our estuaries. Continued trawling inside the MPA compromises these species, and nursery habitat of other species.

Figure 5. Partial protection of the Essex Estuaries Special Area of Conservation. Most of the fishing activity using bottom trawls occurred in the northern section of the site slightly offshore between West Mersea and Clacton on Sea. Hence there is a large area of 'feature' (sandbank and mud habitat) that continues to be affected by seabed trawling. (Map from MPA Reality Check).

[15] Site_-integrity_and_sandbanks_fin.pdf

Case 5: Flamborough Head SAC

Flamborough Head SAC

This site managed by the Northeastern IFCA had the opportunity to close its vulnerable submerged chalk reef to scallop dredging and trawling in 2013 as part of its bottom towed gear byelaw process. It left a large outer area of mapped chalk reef habitat exposed to bottom trawling within the byelaw (Fig 6). NGOs sitting inside & outside the IFCA Committee strongly recommended full site closure. We understand that the outer area of the site was left open as it was important for a certain number of trawler vessels to turn their gear.

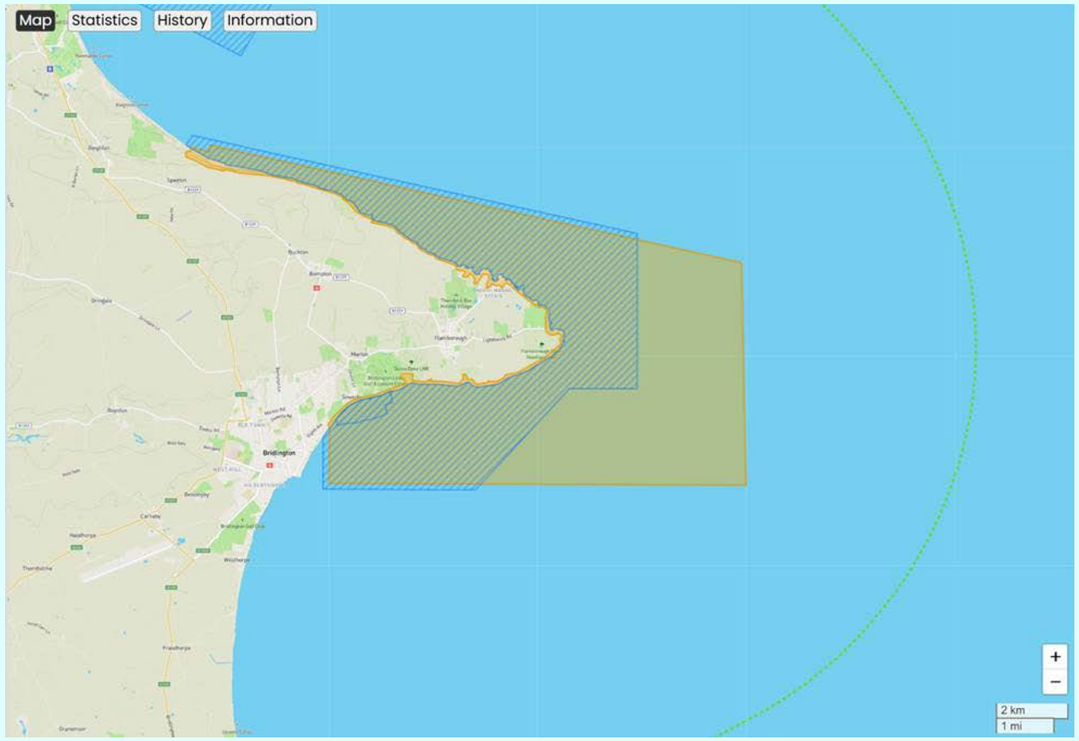


Figure 6. Byelaw (blue hatched area) protecting the inner part of the Special Area of Conservation from bottom trawling. The wider boundary of the SAC (Marine Protected Area) is in yellow, illustrating that only the inner part of this MPA is protected. (Map from MPA Reality Check).

[16] Aquatic Conservation: Marine and Freshwater Ecosystems | Aquatic Journal | Wiley Online Library

[17] Solandt (2018) A stocktake of England's MPA network – taking a global perspective approach. Biodiversity.

Case 6: Berwickshire and North Northumberland SAC

North Northumberland and Berwickshire SAC

1. The site is designated for reefs.
2. Reefs cover the majority of the site
3. There is mixed ground (cobbles, rich sediments and sands) between the reef features.
4. Trawlers hadn't targeted the site in years, as the local trawler fleet was heavily reduced in number since the 1990s.
5. The site was closed entirely in 2014 in order to immediately comply with protecting the site reef feature, and natural function of the site.
6. 3 unviable fishing areas were subsequently 'opened' after an expensive mapping process was enabled to provide greater habitat resolution.
7. These 3 small polygons 'open' to trawling are so small, they cannot be accurately targeted by bottom towed fishing gears, and are unviable for the industry to shoot and bring in its gear.

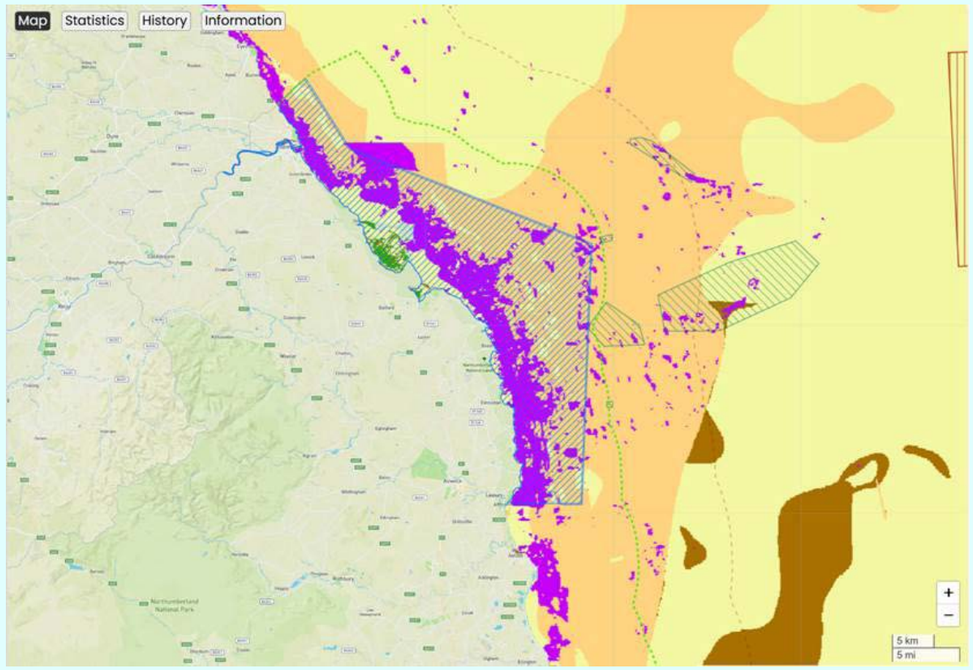


Figure 7. (pink: reef area; peach: mixed cobble ground; yellow: sand). The Berwickshire and North Northumberland IFCA byelaw initially closed the entirety of the SAC (a type of MPA) to bottom towed fishing. A subsequent modification to the byelaw opened 3 small sand areas inside this closed area to bottom trawling. (Map from MPA Reality Check).

A considerable amount of time, money and resources to enable the opening of such small areas to bottom towed fishing could be seen as a distraction from the more important fishing and ecosystem management needs for our coastal seas (monitoring, ensuring sustainable limits on static gear fishing, and managing access and effort of Nephrops trawling vessels). NGOs also believed that this modification of access didn't take into account aspects of 'site integrity' that must consider the function and supporting services of the reefs, and habitats between them that support reef-like species, and host species that migrate between the reefs in their adult, sub-adult and juvenile stages[18].

[18] Marine A new study shows that the seabed landscape crucial for fish conservation - Marine

APPENDIX 2

Meeting the objectives of the 25-year environment plan[19] in protecting 'whole sites'.

There are a number of regulations that have applied evidence of ecological blending between habitats to secure protection beyond 'static' geogenic features. Ecological boundaries are rarely clear, and delineating where habitats start and end is fraught with difficulty[20]. As such, habitats (that are a combination of both physical and biological constituents) can be thought to be on something of a continuum over time and space. In the example below of two adjacent Marine Protected Areas in South Devon, the IFCA closed areas of predominantly sand/gravel and cobble reef habitat to bottom towed fishing gears around clear areas of geological reef habitat. As such, the IFCA was ensuring that the transient nature of species distributions between habitats was protected. This matters because seabed biodiversity can emerge from shallow veneers of sand and gravel adjacent to reefs. Furthermore, demersal mobile species such as cuttlefish, sharks, rays and skates, bass, wrasse, mullet, seabream benefit from whole-site protection.

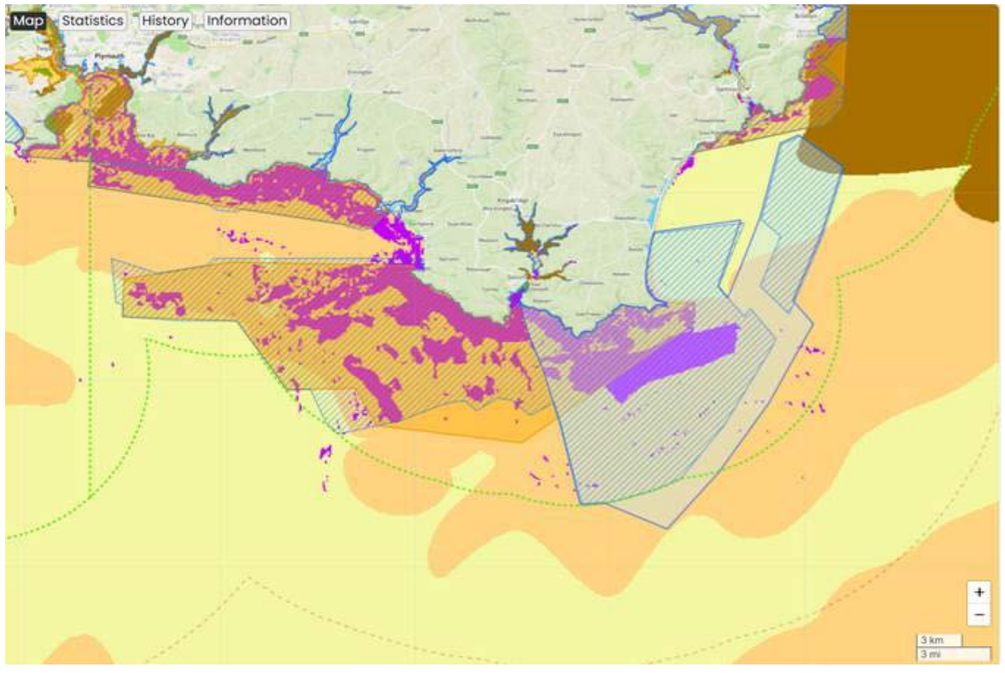
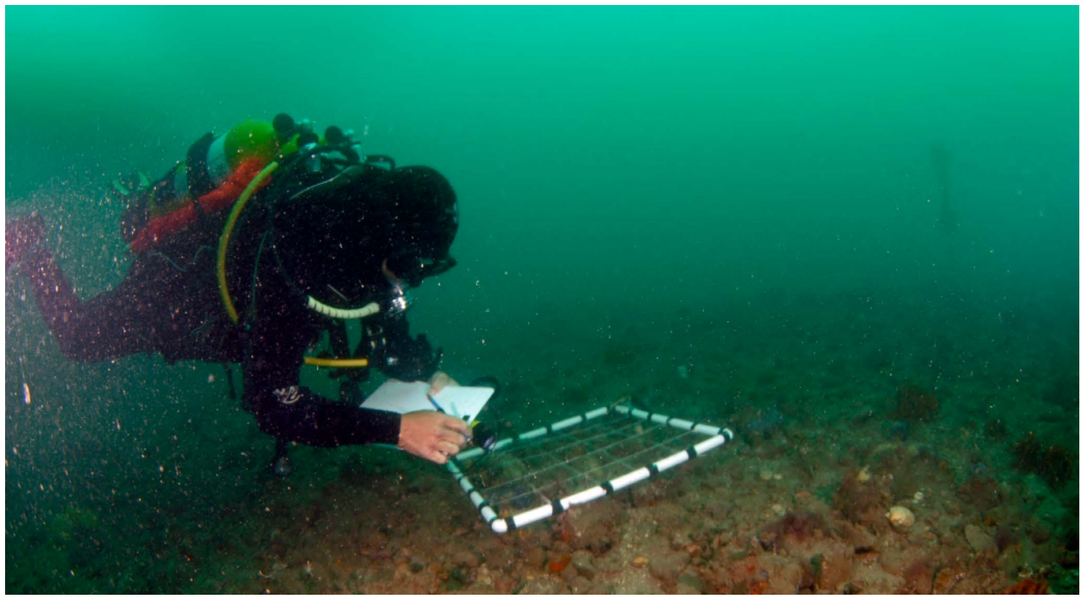


Figure 8. The Start Point SAC. It illustrates 'whole-site' style protection of both reef, and surrounding habitats that are a 'mosaic' of different types of gravel, sand cobble and boulder reef. (Map from MPA Reality Check).

[19] Emerging themes to support ambitious UK marine biodiversity conservation - University of Plymouth

[20] Link position paper on whole site approach.pdf

[21] researchgate.net/publication/257203503_Drawing_lines_at_the_sand_Evidence_for_functional_vs_visual_reef_boundaries_in_temperate_Marine_Protected_Areas



The provenance of 'whole site' measures at Start Point and from those MPAs outlined in the table below is partly as a result of the scientific research carried out at Lyme Bay that showed the patterns of distribution of benthic species was both between and on reef features, coming through thin veneers of sediment on top of rocks, cobbles and boulders. That research from The University of Plymouth informed protection measures including sandy, gravel, cobble and reef habitats for other English sites. These sites provided for a whole-site approach to management because ecosystem effects were taking into consideration in their management[22]:

Site name (SAC)	IFCA district	Area protected (km²)
South Wight Maritime	Southern IFCA	198
Lyme Bay	Southern and Devon and Severn IFCA (shared)	200
Start Point & Eddystone	Devon and Severn and Cornwall IFCA (shared)	340
Wight Barfleur	MMO (offshore)	1373
East of Haig Fras	MMO (offshore)	400

[22] (PDF) Managing marine protected areas in Europe: moving from 'feature-based' to 'whole-site' management of sites

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